

Datasheet

Description:

AKROMID® B3 1 black (2501) is an unreinforced, heat stabilised polyamide 6

Applications

Engineering parts like fasteners, clips, plugs and caps.

Typical values	Test specification	Method	Unit	Value	
				d.a.m.	moist.*

Mechanical Properties

Tensile modulus	1 mm/min	ISO 527-2	MPa	3600	1200
Stress at yield	50 mm/min	ISO 527-2	MPa	85	45
Strain at break	50 mm/min	ISO 527-2	%	20	> 50
Flexural modulus	2 mm/min	ISO 178	MPa	3100	
Flexural strength	2 mm/min	ISO 178	MPa	120	
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m ²	n.b.	n.b.
Charpy impact strength	-30°C	ISO 179-1/1eU	kJ/m ²	n.b.	
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m ²	5	16
Charpy notched impact strength	-30°C	ISO 179-1/1eA	kJ/m ²	2	

Electrical Properties

Volume resistivity		IEC 60093	Ohm x cm	1,0E+13	1,0E+10
Surface resistivity		b.o. IEC 60093	Ohm	1,0E+12	1,0E+10
Comparative tracking index	test solution A	IEC 60112		600	

Thermal Properties

Melting temperature	DSC, 10K/min	DIN EN 11357-1	°C	220	
Temp. of deflection under load HDT/A	1,8 MPa	ISO 75	°C	60	
Temp. of deflection under load HDT/B	0,45 MPa	ISO 75	°C	180	
Temp. index for 50% loss of tens. strength	5.000 Std.	IEC 60216	°C	100 - 140	
Temp. index for 50% loss of tens. strength	20.000 Std.	IEC 60216	°C	90 - 120	

Flammability

Wall thickness			mm	0,4	0,8	1,6	2,0	3,2
Flammability		UL 94	class			V2		
GWFI		IEC 60695-2-12	°C			750		
GWIT		IEC 60695-2-13	°C			675		
Burning rate (< 100 mm/min)	> 1 mm thickness	FMVSS 302				+		

General Properties

Density	23°C	ISO 1183	g/cm ³	1,13	
Humidity absorption	70°C, 62% r.h.	ISO 1110	%	2,6 - 3,4	
Water absorption	23°C, saturated	ISO 62	%	9,0 - 10,0	

Processing

Flowability	7 x 3,5 mm & **	AKRO	mm	1070	
Molding shrinkage	flow	ISO 294-4	%	1,1	
Molding shrinkage	transverse	ISO 294-4	%	1	

b.o.: based on

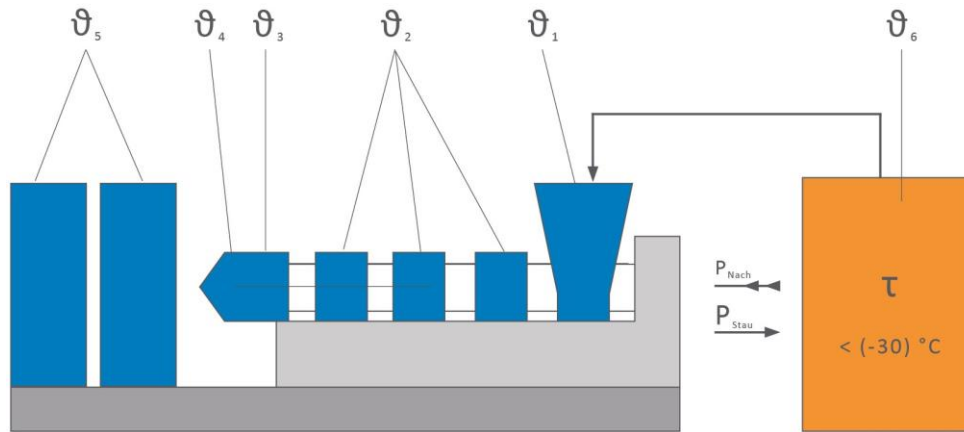
n.b. = not broken

* = specimen acc. ISO 1110 stored

** = mould temperature: 80°C, melt temperature: 270°C, injection pressure: 750 bar

Continuation

Processing recommendations



ϑ_6	Drying time	h	0 - 4
ϑ_6	Drying temperature	°C	80
	Processing moisture	%	0,02 - 0,1
ϑ_1	Feed section	°C	60 - 80
ϑ_2	Section 1 - Section 4	°C	220 - 270
ϑ_3	Nozzle	°C	230 - 300
ϑ_4	Melt	°C	240 - 270
ϑ_5	Mould	°C	40 - 80
P_{Nach}	Holding pressure, spec.	bar	300 - 800
P_{Stau}	Back pressure, spez.	bar	50 - 150
	Injection speed		medium to high
	Screw speed	m/min	8 - 15

The listed values are recommendations. Higher values should be used for higher glass loadings. We recommend only de-humidifying or vacuum dryers. Extensive drying can cause filling problems and surface defects.